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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/918,117	07/30/2001	Akira Tsubouchi	18733/00060	2600

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EXAMINER

VAN PELT, BRADLEY J

ART UNIT PAPER NUMBER

3682

DATE MAILED: 03/18/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/918,117

Applicant(s)

TSUBOUCHI ET AL.

Examiner

Bradley J Van Pelt

Art Unit

3682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 February 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3,6-8,12, 13, and 15 is/are pending in the application.
- 4a) Of the above claim(s) 4,5,9-11 and 14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,6-8,12,13 and 15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election without traverse of Group I (claims 1-3, 6-8, 12 and 13) in Paper No. 7 is acknowledged.

Claims 4,5, 9-11, and 14 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected method of manufacturing, there being no allowable generic or linking claim. Election was made **without** traverse in Paper No. 7.

### *Double Patenting*

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 12 and 13 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-14 of U.S. Patent No. 6,442,992. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims are of the same breadth and scope.

***Claim Rejections - 35 USC § 103***

3. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oya (JP 11-278287) in view of Saurenman et al. (USPN 4,538,647).

Oya discloses a hollow rack shaft (fig. D) which is formed cylindrically by bending a substantially rectangular plate (fig. A) so that parallel two sides of the rectangular plate are joined, wherein in a part of a surface of the rectangular plate a row of rack teeth is formed along a direction of an axis of the rectangular plate, and wherein: said sides of the rectangular has complementary profiles.

Oya does not disclose the complimentary profiles are composed of a continuation of a convex portion and a concave portion so that the sides are engaged when they are joined; wherein a width of a part having a largest width of said convex portion is larger than a width of a part having a smallest width of said concave such that said sides are prevented from being detached; wherein said convex portion and said concave portion mutually are caulked such that the mutual gap is removed.

Saureman et al. disclose complimentary profiles composed of a continuation of a convex portion and a concave portion (fig. 1) so that the sides are engaged when they are joined; wherein a width of a part having a largest width of said convex portion is larger than a width of a part having a smallest width of said concave portion such that said sides are prevented from being

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detached; wherein said convex portion and said concave portion mutually are caulked (see fig. 6) such that the mutual gap is removed.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the hollow rack shaft of Oya with a interlocked metal seam for the purpose of providing an expedient and inexpensive rolling and stamping operation (see column 1, lines 50-56 in Saurenman et al.)

4. Claims 6-8, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oya (JP 11-278287) in view of Gipson, Jr. (USPN 4,978,104).

Oya discloses a hollow rack shaft which is formed cylindrically by bending a substantially rectangular plate so that parallel two sides of the rectangular plate are joined, wherein a part of a surface of the rectangular plate a row of rack teeth is formed along a direction of an axis of the rectangular plate comprising: a second plate (fig. A and B) for an area other than the rack teeth.

Oya does not disclose a first plate for a rack teeth area provided where said row of rack teeth is to be formed; said first plate is thicker than said second plate; said first plate is made of a material more satisfactory in hardenability than that of said second plate; said first plate is welded to said second plate.

Gipson Jr. discloses a first plate (28) for a rack teeth area provided where said row of rack teeth is to be formed; said first plate is thicker than a second plate; said first plate is made of a material more satisfactory in hardenability than that of said second plate; said first plate is welded to said second plate (see column 4, lines 50-53).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the rack apparatus of Oya with a second plate for the purpose of reducing cost by eliminating the stamping step.

5. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oya (JP 11-278287) in view of Urschel (USPN 1,983,584).

Regarding claim 12, Oya discloses a hollow rack shaft (fig.A), which is formed by bending a plate so that the two sides of the plate are joined and in a part of the surface of which a row of rack teeth along a direction of the axis is formed.

Oya does not disclose that the rack shaft is provided with a first area and second areas on both sides of it, and in said two second areas, a complete cylindrical part is formed and at least one of the second areas has a diameter different from the diameter of the semi-cylindrical part in said first area, the diameter of at least one of said second areas is smaller than the diameter of said first area.

Urschel renders obvious a hollow shaft in (fig. 20) that is provided with a first area (88) and a second areas (4,40) on both sides of it; and in said two second areas, a complete cylindrical part is formed and at least one of the second areas has a diameter different from the diameter of the cylindrical part in said first area.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Oya to alter the areas of the rack shaft for the purpose of reducing the mass of the shaft.

Regarding claim 12, applicant is reminded that although the product by process claim is permissible the process in which the product is made cannot be given patentable weight in a

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product claim. Therefore, since the limitation of “formed cylindrically by bending a substantially rectangular plate so that the two parallel sides are joined” is not given patentable weight, the rack of that of Oya is deemed fully to meet the instantly claimed invention. In other words, the determination of patentability in a product-by-process claim is based on the product itself, even though the claim may be limited and defined by the process. The product or article in such a claim is unpatentable if it is the same as or obvious from the product of the prior art, even if the prior product or article was made by a different process. See *In re Thorpe*, 777 F.2d 695, 697, 227 USPQ 964, 966 (Fed. Cir. 1985).

### ***Response to Arguments***

6. Applicant's arguments with respect to claims 1-3 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments regarding claims 12 and 13 have been fully considered but they are not persuasive. With respect to the rejection(s) of claim(s) 12 and 13 under *35 USC § 103* in view of Oya and Urshel, applicant has dissented stating the examiner has not mentioned as to why one skilled in the art would be motivated to make the proposed combination, as required by the **MPEP**. Pg. 6 lines 15-18 of the office action filed November 15, 2002, states “for the purpose of reducing the mass of the shaft.”


### ***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bradley J Van Pelt whose telephone number is (703)305-8176. The examiner can normally be reached on M-Th 7:00-4:30, 2nd F 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A Bucci can be reached on (703)308-3668. The fax phone numbers for the organization where this application or proceeding is assigned are (703)746-9391 for regular communications and (703)305-3597 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-2168.

BJVP  
March 11, 2003

  
Thomas R. Hannon  
Primary Examiner